

# The BMW i3 and the BMW i8 - Start in the Era of Electromobility

Dipl.-Ing. Peter Langen  
BMW AG, Munich, Germany



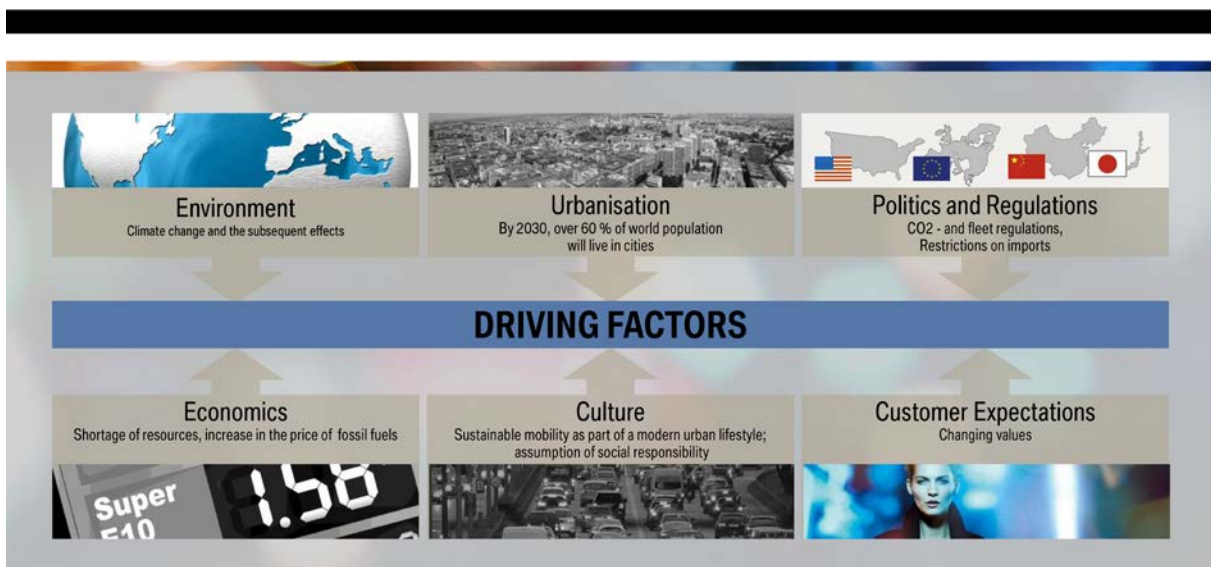
Peter Langen, Senior Vice President BMW Group

## BMW i - THE FUTURE OF SUSTAINABLE AND INDIVIDUAL MOBILITY.

BMW  
GROUP



### THE FUTURE OF MOBILITY.



## MINI E AND BMW ActiveE SERVE AS KEY LEARNING PROJECTS FOR BMW i.

MINI E (2009-2012)	BMW ActiveE (2011-2014)	BMW i3 and BMW i8
		
16 million kilometers ~600 vehicles	16 million kilometers ~1.000 vehicles	
High satisfaction of mobility needs. Range was rarely the limiting factor. Most users charge 2-3 times per week and charging events decreased during usage.	Adequate vehicle. High interest of purchase. Joy of driving and one-pedal-feeling.	BMW i is more than just an electric car. BMW i offers 360° ELECTRIC. BMW i delivers joy of driving.

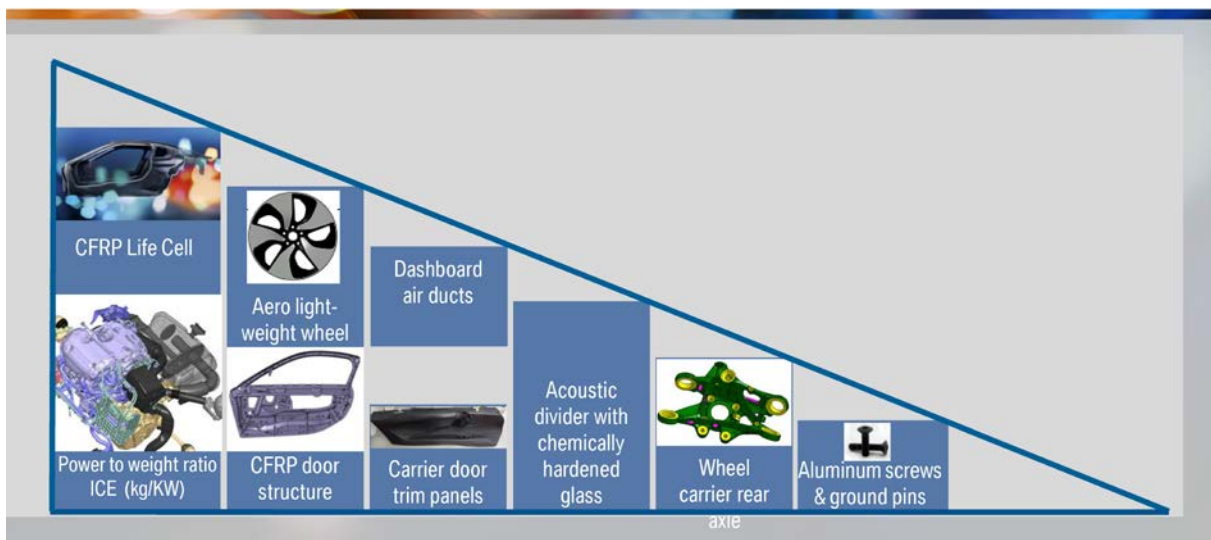
## STRATEGY NUMBER ONE – MANAGING THE TECHNOLOGICAL CHANGE TO REMAIN FUTURE PROOF.



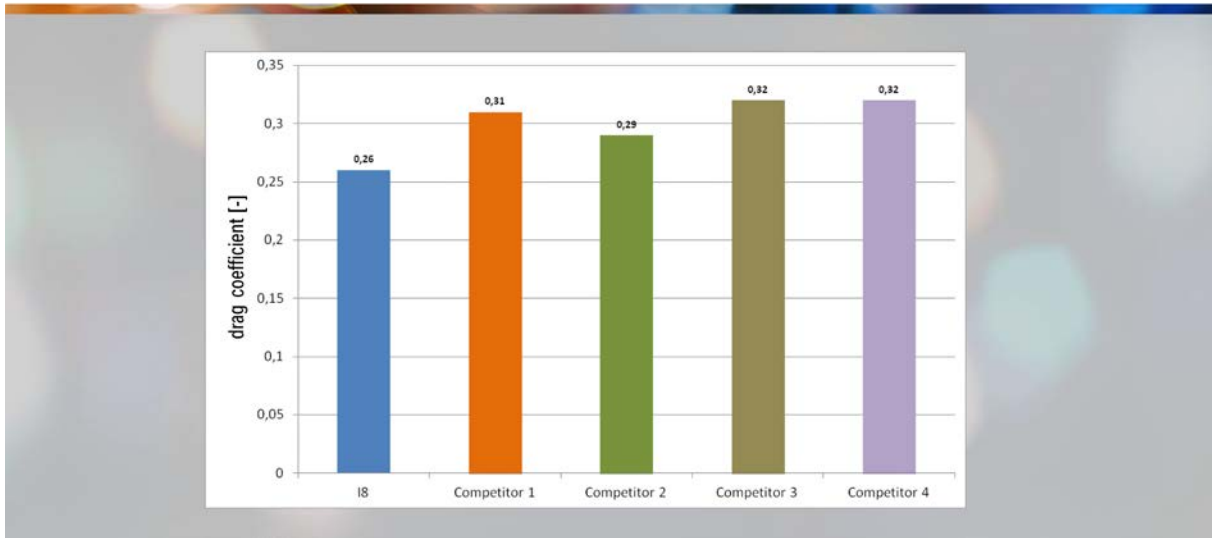
## AN EXTREME LIGHTWEIGHT CONSTRUCTION DUE TO ITS LIFE DRIVE ARCHITECTURE AND CFRP MATERIALS.



## DRIVING THE REVOLUTION OF JOY. LIGHTWEIGHT CONSTRUCTION – FROM CONCEPT TO DETAIL.



**DRIVING DYNAMICS GENES.  
AERODYNAMICS.**



**DRIVING DYNAMICS GENES.  
MASS DISTRIBUTION.**

**mass distribution:**  
low center of gravity  
with ideal distribution (50:50)

long wheelbase, l=2800 mm

**moment of inertia:**  
reduced yaw moment of inertia  
for high agility

$a_z = 0,475$

$$a_z = \frac{i}{i} = \frac{\sqrt{\frac{O_z}{m \cdot F_{R12}}}}{\text{Radstand}}$$

**weight of vehicle:**  
low weight, m=1490 kg

extended track, s=1679.5 mm

center of gravity in z [mm]

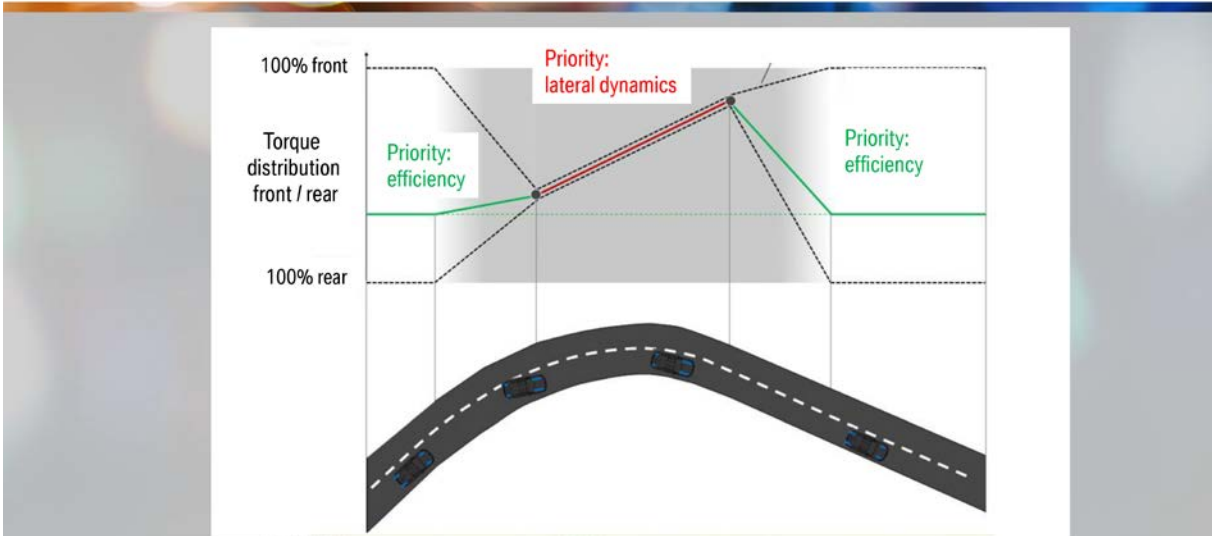
average track [mm]

BMW i8

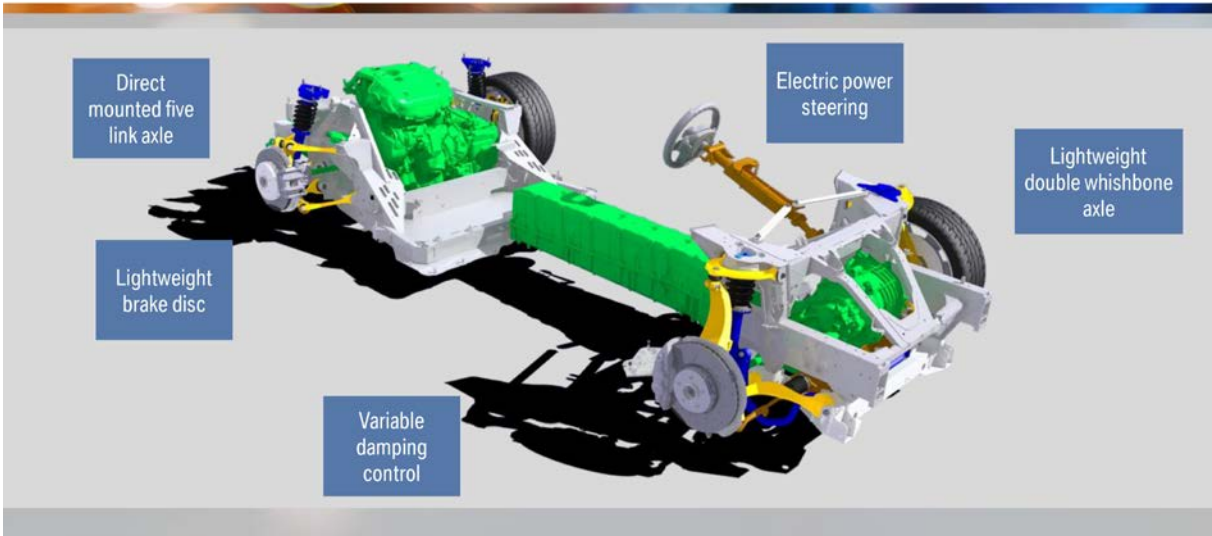
Competitor 1, Competitor 2, Competitor 3, Competitor 4



### INTELLIGENT TORQUE DISTRIBUTION FOR IDEAL HANDLING PERFORMANCE.

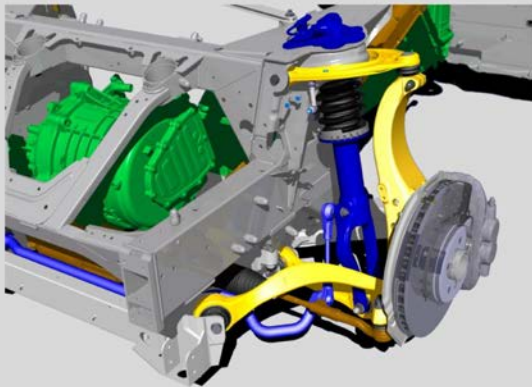


### DRIVING THE REVOLUTION OF JOY. BMW i8 CONCEPT / BMW VISION EFFICIENT DYNAMICS.

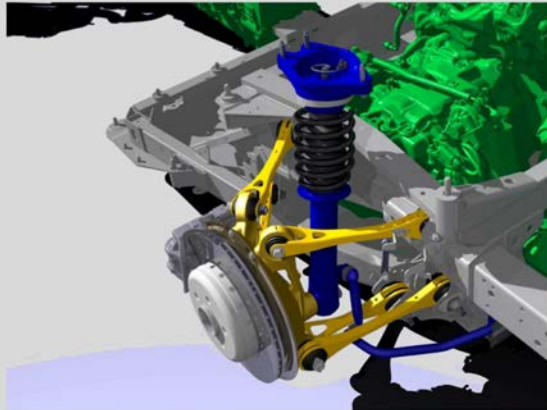


## DRIVING THE REVOLUTION OF JOY. BMW i8 CONCEPT / BMW VISION EFFICIENT DYNAMICS.

Front Suspension – ISO View



Rear Suspension – ISO View



## DRIVING EXPERIENCE BMW i8. SELECTION OF DRIVE MODE.



### COMFORT

Start-up mode: Both drives in hybrid mode with intelligent interaction – perfect realization of EfficientDynamics



### SPORT

Sporty and dynamic driving with maximum boost function  
Both drives run permanently, engine charge the high voltage battery



### eMODE

100% electric driving  
Max. 120 km/h / range up to ca. 35 km



### ECO PRO

Efficiency program with smooth driving  
Efficiency-optimized accelerator, transmission and heating/air conditioning functions  
In eMODE: Maximization of electric range

## BMW i3 AND BMW i8. THE TWO BOOKENDS OF BMW i.



## THE BMW i3. THE MOST VISIONARY CONCEPT FOR URBAN MOBILITY.



- 0-100 km/h = 7,2 s
- 0-60 km/h = 3,7s
- Electricity consumption equals 1,5 l/100km → efficiency 20-30% better than any other EV
- Weight (DIN) = 1195kg = 250-550 kg less than conventional EV's
- „One pedal operation“ reduces braking by 90%
- Stable range between 130-160km ; 300km with the range extender
- Turning circle = 9,8m = 10% better than a MINI



**BMW i PERFECTLY COMPLETES THE BMW BRAND PORTFOLIO.****THANK YOU FOR YOUR ATTENTION.****...zur Freude am Fahren!**